REMARKS

Applicant, by the amendments presented above, has made a concerted effort to present claims which clearly define over the prior art of record, and thus to place this case in condition for allowance.

In the Office Action, the Examiner rejected the pending claims citing United States Patent No. 5,102,587 (Kumamura et al.) and United States Patent Application Publication No. 2003/0062643 (Bulgrin et al.).

Applicant has amended independent Claims 1 and 9 to define that the observer is denoted as an equation for obtaining an estimated value of a state variable by solving a differential equation expressed to estimate a state variable such that a control target output coincides with a model output. This is supported by column [0011] of the original specification.

As described in column [0009] of the specification, an object of the present invention is to achieve precise propelling power control without the use of a pressure sensor such as a load cell.

In the melt pressure estimation method without the use of a pressure sensor in prior arts such as Bulgrin et al., the "observer" is used for estimating the melt pressure. However, such prior arts do teach using the derivative of the angular velocity in the estimated melt pressure calculation, as the Examiner has noted. Therefore, the prior arts using the "observer" lower the resistance against the

noises and can not control a precise melt pressure.

The present invention uses the "observer" which is denoted as an equation for obtaining an estimated value of a state variable by solving a differential equation expressed to estimate a state variable such that a control target output coincides with a model output. The "observer" of the present invention thus made by previously solving the differential equation is not required to execute differential equation on actually obtaining the estimated melt pressure value $\delta\hat{}$.

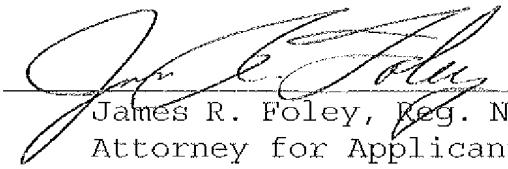
On the other hand, Kumamura et al. only discloses a conventional injection molding apparatus which uses the pressure sensor 50 (See column 3, lines 60-65) and doesn't use "observer" for estimation of the melt pressure. The conventional technique using the pressure sensor such as Kumamura et al. can not apply the melt pressure estimation method using the "observer".

Therefore, we believe that the present invention is patentable over the references cited by the Examiner.

Should the present claims not be deemed adequate to effectively define the patentable subject matter, the Examiner is respectfully urged to call the undersigned attorney of record to discuss the claims in an effort to reach an agreement toward allowance of the present application.

Respectfully submitted,

Date: June 9, 2009

By: 

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